REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8707200664 DOC. DATE: 87/07/10 NOTARIZED: NO DOCKET # FACIL: STN-50-528 Palo Verde Nuclear Station, Unit 1, Arizona Publi 05000528 AUTH. NAME AUTHOR AFFILIATION BRADISH, T. R. Arizona Nuclear Power Project (formerly Arizona Public Serv HAYNES, J. G. Arizona Nuclear Power Project (formerly Arizona Public Serv RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 87-016-00: on 870609, both trains of EFS pump room air exhaust cleanup sys rendered inoperable simultaneously. Caused by personnel error.Rept of event issued to personnel & warning tag placed on equipment.W/870710 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED:LTR _ ENCL _ SIZE: _5_ TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

NOTES: Standardized plant. M. Davis, NRR: 1Cy.

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	NRR/DREP/RPB	2	2	NRR/PMAS/ILRB	1	1
	NRR/PMAS/PTSB	1	1.	REG FILE 02	1	1
	RES DEPY GI	1	1	RES TELFORD, J	1	1
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EXTERNAL:	EG&G GROH, M	5	5	H ST LOBBY WARD	1	1
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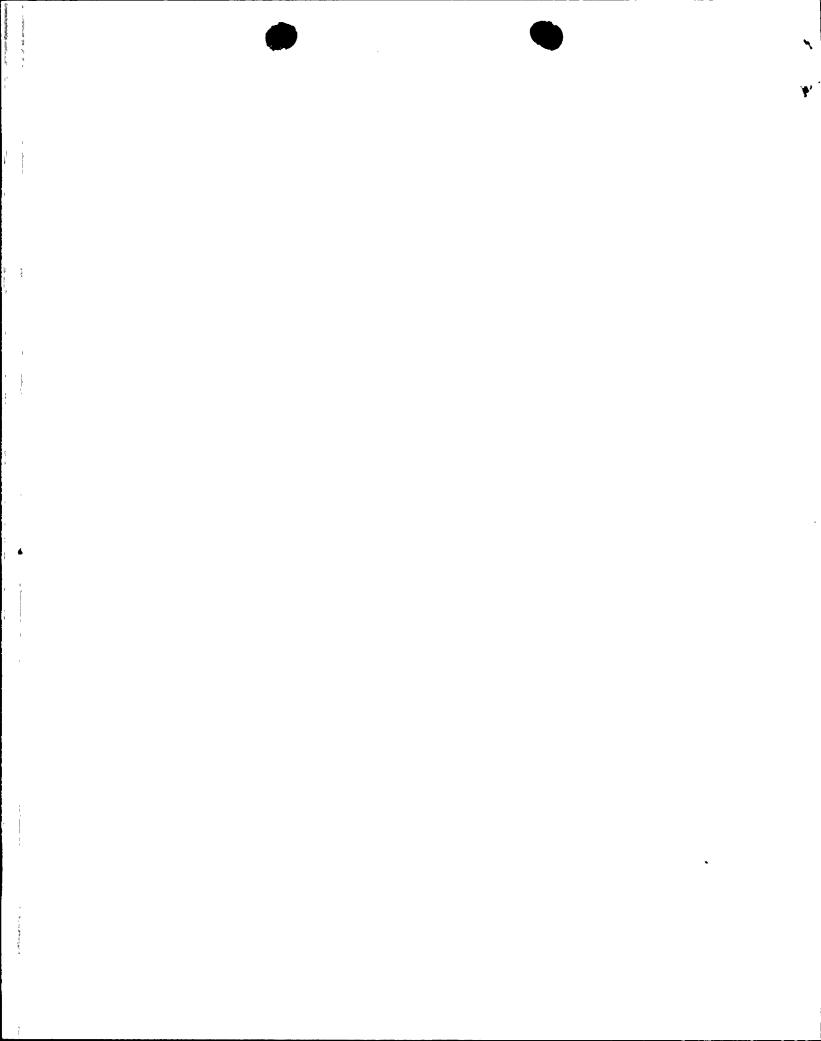
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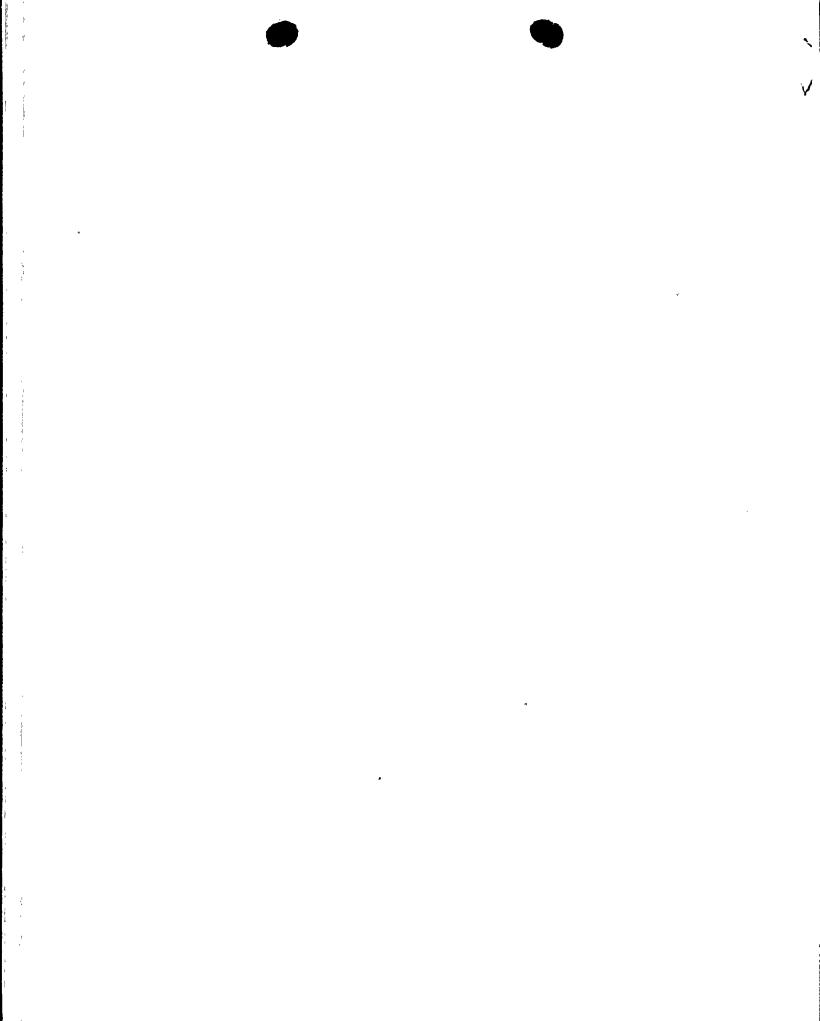
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issued to the appropriate Operations, Maintenance and Work Control personnel,																	
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guidance for the preparation of Online Outages.																	
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NRIC Form 386A (9-83) LICENSE	E EVENT REPORT (LER) TEXT CONTIN		GULATORY COMMISSION DMB NO. 3150-0104 1/88	
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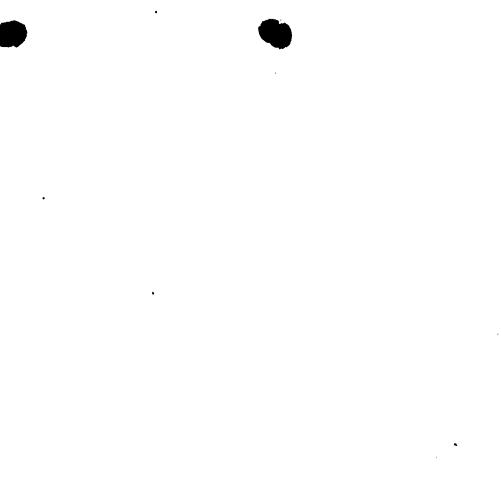
TEXT (If more space is required, use additional NRC Form 305A's) (17)

On June 11, 1987, it was discovered that between 1700 and 2330 MST on June 9, 1987, with Palo Verde Unit 1 in Mode 1 (POWER OPERATION) operating at 100 percent power, both trains of the Engineered Safety Feature (ESF) Pump Room Air Exhaust Cleanup System (PRAECS)(VF) were rendered inoperable. With both trains of ESF PRAECS inoperable, the ACTION Statement for Technical Specification 3.7.8 was exceeded and Limiting Condition for Operation 3.0.3 should have been entered.

During ESF PRAECS operation following the receipt of a Safety Injection Actuation Signal (SIAS)(JE), the levels below the 100' elevation of the Auxiliary Building (NF) are isolated from the upper levels by the automatic closure of essential isolation dampers (BDMP). Air is then exhausted from the lower levels of the Auxiliary Building via a common connecting tunnel to the Fuel Building (ND) Air Filtration Units (AFU)(HFA-JO1 and HFB-JO1) and then to the atmosphere. Technical Specification Surveillance Requirement 4.7.8.b.3 requires that an ESF PRAECS flowrate of 6000 cubic feet per minute (cfm) +/- 10 percent be maintained from the Auxiliary Building.

While reviewing the work completed during a recent Fuel Building Essential Ventilation System (FBEVS)(VG) Train "B" online outage, the on-shift Shift Supervisor (utility-licensed) identified that the combination of having the Train "B" essential AFU (HFB-JO1) dcor(s) open and the Train "B" essential isolation damper (HFB-M06)(BDMP) open may have rendered both trains of ESF PRAECS inoperable. AFU HFB-JO1 door(s) were open for door seal replacement and damper HFB-M06 (which is located inside of HFB-JO1) was intentionally opened to rework the damper's actuator (HCU). If the operable Train "A" of the ESF PRAECS had to be started following a SIAS, the ability to exhaust the Technical Specification required flowrate from the Auxiliary Building below the 100' elevation would have been impaired. Subsequent testing conducted under an approved work order in Palo Verde Unit 3 on June 16, 1987 confirmed that approximately 3000 cfm could be exhausted from the Auxiliary Building under worst case system configuration vice the required 6000 cfm.

The original June Online Outage Schedule identified a work order to replace damper HFB-MO6, at that time there was no work order for HFB-JO1 door seal replacement listed. On June 9, 1987, the damper work order was amended to rework the damper actuator. During this time parts became available for the HFB-JO1 door seal replacement and it was added to the outage schedule. The clearance was hung and the damper was de-energized (fails open) at approximately 0540 on June 9, 1987 and remained this way until 2212 on June 10, 1987. The work order for the door seal replacement was initiated at 1700 on June 9, 1987 and the seals replaced by 2330 on June 9, 1987. Therefore, both trains of ESF PRAECS could have been inoperable for up to 6½ hours. The root cause of the event was determined to be a cognitive personnel error by the Work Control Shift Supervisor (utility-licensed) who did not recognize that concurrent maintenance activities such as these would render the system inoperable. There were no specific procedural guidelines governing the development and approval of the Online Outage Schedule.



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83)	LICENSEE EVENT REPOR		UATION		MB NO 3150-0104
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	Verde Unit 1 Dece is required, use addronal NRC Form 305A's/(17)	0 5 0 0 0 5 <u>2</u> B	817 -011 6	5 - 0 10	03050
des iso	the time the event was discovere cribed, no longer existed since lation damper had been shut. As lowing actions will/have been ta	the AFU door(s) ha corrective action	d been closed to prevent re	and the currence	-
1)	An Operations Department Exper been developed and issued to a with their crews. In addition been distributed to Work Contr personnel for their information	11 Shift Superviso: , a copy of one of ol and Maintenance	rs to discuss the Night Ord	this eve ers has	ent .
2)	Warning tags have been placed AFUs, the Fuel Building Suction cross tie the Fuel Building and the Auxiliary Building above as	n Dampers, and the d Auxiliary Buildin	large plugs w ng as well as	hich cou	ld
3)	Operation's Procedure "FUEL BU include specific guidelines for doors/inspection panels to be o	r allowing certain	has been revis Fuel Building	ed to	
4)	Engineering is conducting a des size of penetration openings with ESF PRAECS operability. The state for Technical Specification flat indicated that system operability pressures in the area than upon the Auxiliary Building.	ithin the system in udy will also inclu ow requirements sin ity is more depende	n order to ens ide a review o nce the Unit 3 ent upon the r	ure f the ba testing elative	
5)	The Plant Manager has issued a discussing the precautions bein operability until the Engineer requesting that all personnel a	ng implemented to e ing design study is	ensure ESF PRA s completed an	ECS d	rs
6)	The Day Shift Supervisor (util: with the responsible Work Contr			event	
7)	An administrative control proce for the preparation of Online (concern regarding maintenance a safety related equipment potent equipment inoperable.	Outages. This proc activities being co	edure will ad onducted on on	dress th e train	e
leak ESF (LOC belc	ESF PRAECS is required to contro tage from below the 100' elevation pumps in the ESF equipment rooms CA). Control of airborne radioad ow the 100' elevation of the Auxi ting releases to above the 100'	on in the Auxiliary 5) following a Loss ctivity includes fi iliary Building to	7 Building (in 3 of Coolant A 11tering relea	cluding ccident ses from	the

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NRC Form 366A 19-831 LICENSE	E EVENT REPORT (LER) TEXT CONTIN	UATION		BULATORY COMMISSION
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TEXT III more space is required, use additional NRC Form 305A's) (17)

Testing was performed in Palo Verde Unit 3 to measure the actual air flow from the Auxiliary Building and differential pressure between the ESF pump room area and the atmosphere under worst case conditions. The results indicate that 3000 cfm was being evacuated to the essential AFU (consisting of both High Efficiency Particulate Air and Charcoal Filters [FLT]) obtaining a subatmospheric pressure of -0.120" (water gauge). Based on a review of the test results and the Final Safety Analysis Report LOCA analysis, the releases to the atmosphere would still be within the allowable 10 CFR Part 100 limits and therefore would not adversely affect the health and safety of the public.

An Engineering Evaluation is being conducted to determine whether releases from the lower levels of the Auxiliary Building to the upper levels above the 100' elevation are limited such that Palo Verde personnel can obtain and analyze post accident grab samples without radiation exposures to any individual in excess of 5 rem whole body and 75 rem to the extremities (10 CFR Part 50, Appendix A, GDC 19). Preliminary evaluation indicates that personnel will be able to obtain a sample without exceeding the dose limits specified above. An Engineering Evaluation Request has been submitted for calculational verification and a supplement to this LER will be issued to provide the final results of the evaluation.

There were no structures, components, or systems that were inoperable at the start of the event, other than those previously described, that contributed to the event. There were no unusual characteristics of the work location which contributed to the event. There were no automatic or manually initiated safety system responses.

There have been no previous similar events reported regarding the inoperability of two independent trains of a safety related system due to the inappropriate scheduling of maintenance activities.





Arizona Nuclear Power Project

P.O. BOX 52034 • PHOENIX, ARIZONA 85072-2034

192-00244-JGH/TRB/TJB . July 10, 1987

Document Control Desk U.S. Nuclear Regulatory Commission Washington, D.C. 20555

Subject: Palo Verde Nuclear Generating Station (PVNGS) Unit 1 Docket No. 50-528 Licensee Event Report 87-016-00 File: 87-020-404

Dear Sirs:

Attached please find Licensee Event Report (LER) No. 87-016-00 prepared and submitted pursuant to 10CFR 50.73. In accordance with 10CFR 50.73(d), we are herewith forwarding a copy of the LER to the Regional Administrator of the Region V Office.

If you have any questions, please contact T. R. Bradish, Compliance Supervisor at (602) 393-3531.

Very truly yours,

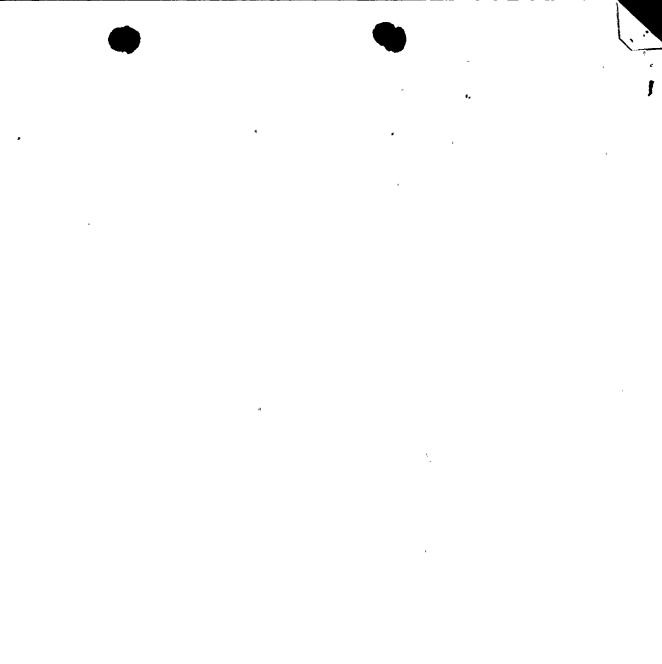
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J. G. Haynes Vice President Nuclear Production

JGH/TJB/cld

Attachment

cc: 0. M. DeMichele (all w/a) E. E. Van Brunt, Jr. J. B. Martin R. P. Zimmerman R. C. Sorenson E. A. Licitra A. C. Gehr INPO Records Center



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